

September 5, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19I0211

Re: Ammonia-Storm Ditch

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 8 sample(s) on 9/5/2019 11:25:00AM for the analyses presented in the following report as Work Order 19I0211.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager



WORK ORDER SAMPLE SUMMARY

Date: *Thursday, September 5, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Ammonia-Storm Ditch
Lab Order: 19I0211

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0211-01	Plate Mill Storm Ditch		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-02	Main Storm Ditch		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-03	Cannon Storm Ditch		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-04	NW Storm Ditch		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-05	SWTP Effluent/Clarifiers		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-06	999		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-07	001		09/05/2019 00:00	9/5/2019 11:25:00AM
19I0211-08	031		09/05/2019 00:00	9/5/2019 11:25:00AM

Analytical Results

Date: Thursday, September 5, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0211-01
Client Project:	Ammonia-Storm Ditch	Sampled:	09/05/2019 0:00
Client Sample ID:	Plate Mill Storm Ditch	Received:	09/05/2019 11:25
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/05/2019 16:53

Analytical Results

Date: Thursday, September 5, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0211-02
Client Project:	Ammonia-Storm Ditch	Sampled:	09/05/2019 0:00
Client Sample ID:	Main Storm Ditch	Received:	09/05/2019 11:25
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/05/2019 16:55



Analytical Results

Date: Thursday, September 5, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: Cannon Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0211-03
Sampled: 09/05/2019 0:00
Received: 09/05/2019 11:25

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	ND	0.10		mg/L	1	09/05/2019 17:02

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Analytical Results

Date: Thursday, September 5, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: NW Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0211-04
Sampled: 09/05/2019 0:00
Received: 09/05/2019 11:25

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	0.13	0.10		mg/L	1	09/05/2019 17:05

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Analytical Results

Date: *Thursday, September 5, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: SWTP Effluent/Clarifiers
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0211-05
Sampled: 09/05/2019 0:00
Received: 09/05/2019 11:25

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	0.14	0.10		mg/L	1	09/05/2019 17:07

Analytical Results

Date: *Thursday, September 5, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0211-06
Client Project:	Ammonia-Storm Ditch	Sampled:	09/05/2019 0:00
Client Sample ID:	999	Received:	09/05/2019 11:25
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 14:10			
Nitrogen, Ammonia (As N)	di	A	0.12	0.10		mg/L	1	09/05/2019 17:10

Analytical Results

Date: *Thursday, September 5, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0211-07
Client Project:	Ammonia-Storm Ditch	Sampled:	09/05/2019 0:00
Client Sample ID:	001	Received:	09/05/2019 11:25
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 15:39			
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	0.39	0.10		mg/L	1	09/05/2019 17:12

Analytical Results

Date: *Thursday, September 5, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia-Storm Ditch
Client Sample ID: 031
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0211-08
Sampled: 09/05/2019 0:00
Received: 09/05/2019 11:25

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 09/05/2019 15:39			
Nitrogen, Ammonia (As N)	di	A	0.15	0.10		mg/L	1	09/05/2019 17:15

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

^d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

ⁱ Kansas Dept Health & Env. NELAP (#E-10397)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 4.2°C
 MICROBAC®

Comments

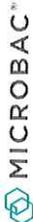
No time. Samples preserved at lab

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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CHAIN OF CUSTODY RECORD

Number **152266**

Instructions on back

Lab Report Address

Client Name: *ArcelorMittal*

Address:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

Project:

Location:

PO No.:

Sampled by (PRINT): *[Signature]*

Sampler Signature:

Sampler Phone No.:

Turnaround Time

- Routine (5 to 7 business days)
- RUSH* (notify lab)

(needed by)

Report Type

- Results Only Level 1 Level 2 Level 3 Level 4 EDD

Send Invoice via: Mail Fax e-mail (address)

Compliance Monitoring? Yes No

Agency/Program

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C) *4.5*

Therm ID *213/412*

Holding Time

Samples Received on Ice? Yes No N/A

Custody Seals Intact? Yes No N/A

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Additional Notes
	Storm-Ditch Plate	9/5/19						19T0211
	Storm-Ditch main							-01
	Storm-Ditch Canal							-02
	Storm-Ditch NW							-03
	SWTP Clarifier							-04
	001 Flue							-05
	999							-06
	031							-07
								-08

Hazard Identification

Hazardous Non-Hazardous

Radioactive

Sample Disposition

Dispose as appropriate Return Archive

Relinquished By (signature) *[Signature]*

Date/Time 9/5/19 0800

Received By (signature) *[Signature]*

Date/Time 9/5/19 0800

Relinquished By (signature) *[Signature]*

Date/Time 9/5/19 1108

Received By (signature) *[Signature]*

Date/Time

Relinquished By (signature) *[Signature]*

Date/Time

Received By (signature) *[Signature]*

Date/Time 9/5/19 1108

